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## Polymeric surfactants based on the chemical modification of alternating aliphatic polyketones

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1. The goal of supramolecular chemistry is to study and create novel functional structures joined by multiple chemical components via intermolecular interactions.
2. Supramolecular chemistry may be the bridge that chemists should build to connect physics and the general laws of the universe with biology and the emergence of life. *Ang. Chem. Intern.*, 2015. 54(11): p. 3276-3289.
3. The chemical modification of aliphatic polyketones with primary amines using the Paal-Knorr reaction may provide countless multifunctional polymers. (This PhD thesis).
4. Polyketone-based surfactants are interesting supramolecular building blocks that allow fabricating stimuli-responsive soft-materials at the nano-scale level.
5. Aliphatic polyketones represent a versatile starting material for the synthesis of amphoteric surfactant polymers, which can be used, in combination with dyes, for the formation systems with specific functionalities. (Chapters 3 and 5).
6. Electrostatic self-assembly (used through this thesis), based on electrostatic and cooperative binding mechanisms, is an easy, cheap, and versatile method for the fabrication of multi-functional nanostructures. As a consequence, this approach can make the scientific life of a marine biologist easier and a little handy. In addition, it keeps you away from becoming an alcoholic as others marine biologists working on polyketone-based self-healing materials.
7. Technologies for purifying polluted water or the use of CO<sub>2</sub> as a cheap reactant for the synthesis of polymers are well-meaning scientific initiatives. However, on a more general level we must aim at transforming the modern production methods in such a way that we do not kill ourselves.
8. In our modern life, which can be defined as the human epoch without aim and hope, the utopia should be taught to everyone. What is utopia? Utopia represents the horizon. Thus, I move two steps closer; it moves two steps further away. I walk another ten steps and the horizon runs ten steps further away. As much as I may walk, I will never reach it. So what is the point of utopia? The point is this: to keep walking. *Fernando Birri*.
9. As Friedrich August Kekulé von Stradonitz said "Let us learn to dream, and perhaps then we shall learn the truth. But let us also beware not to publish our dreams until they have been examined by the wakened mind". Nevertheless, do not either permit the "wakened mind" to destroy our dreams.